Remarks

Claims 1-35 are pending in the present application. All of the claims have been rejected by the Examiner. The listed amended claims together with these remarks respond to the Office Action dated October 24, 2005. Reconsideration of the present application is requested.

The drawing has been objected to under 37 CFR 1.83(a) as not showing the claimed " mounting of a system to an inner/outer surface of a heat generation device...." The "system" as claimed in claim 19 comprises a panel and a liquid-filled conduit. Figures 7 and 8 clearly show the panel. The conduit is shown as part of the panel. While no fluid is shown, 37 C.F.R. 1.83(a) cannot be read to require the showing of fluid in the conduit. It is unclear from the Examiner's comments what is missing in the drawing figures that would normally be shown. The applicant suggests that everything that must be shown in the drawing to depict a "system" is present in the drawing and that the objection is therefore traversed.

Claims 1, 6-8, 19, 21, 22, 24, have been rejected by the Examiner under 35 U.S.C. 102(b) as being anticipated by Pierce (4,470,542) et al.

Applicants respectfully contend that their invention is not anticipated by Pierce. Pierce's heat-transfer unit, hydro-grate 1, "is installed in the fireplace ...." (claim 1) and fuel, such as wood, is burned thereon. Thus, the hydro-grate's liquid-conducting tubes are readily subject to corrosion by combustion products and by-products or thermal fatigue. Most importantly, Pierce does disclose, suggest, or speculate on the use of a panel having conduits therein, discrete or integrally formed by molding or casting, and not in direct contact with the burning fuel.

Applicant's invention, in all of its various embodiments, requires a panel having a conduit formed therein. Nothing in Pierce teaches or suggests a panel having a conduit formed therein. Accordingly, because Pierce does not teach or suggest the panel of the present claims, the rejection of claim 1 and 19 is traversed.

Since claims 6-8, depend from allowable claim 1, claims 6-8 are also allowable. Claims 21, 22 and 24 being dependent from allowable claim 19 would also be allowable.

The Examiner has rejected claims 2 and 3 under 35 U.S.C. 103(a) as being unpatentable over Pierce in view of Bussjager (4,660,761). The Examiner cites Bussjager as addressing the problem of condensation as a source of corrosion for evaporator 70 (which uses a refrigerant), particularly in view of "condensing flue products" (col.3, lines 51-55).

However, even if Pierce and Bussjager are properly combinable, a point that the applicant

does not concede, they still do not recite or suggest all of the elements of the present claims. Specifically, no panel with a conduit formed therein is recited in either reference. Further, neither recognizes the problems associated with placing the conduit for the liquid directly in contact with the fire and therefore neither reference can provide the solution of removing the conduit from direct contact with the fire. Because the combined references neither teach nor suggest all of the elements of present claims 2 and 3, the rejection is traversed.

Although not specifically identified as having been rejected or what combination of prior art was used, claim 4 appears to stand rejected as an "obvious design choice." Because claim 4 is dependent from allowable claim 1, claim 4 is allowable as well. Further, Applicants have disclosed the critical nature of the enclosure's ability to withstand the high temperature of the combustion chamber as well as encapsulated conduits conducting hot liquid. "However, high temperatures also occur adjacent to the source of heat in the combustion chamber, for example, adjacent a flame emitted from a burner in a gas fireplace, which results in high temperatures at certain locations on the side and rear panels of a combustion chamber enclosure that are adjacent to the heat source."[0041]. "Another important advantage of using such moldable materials is that the conduits may be directly and integrally formed within panels of the combustion chamber enclosure during the molding process. This provides many design options including intricate conduit designs and positioning arrangements relative to the panels to help position the conduits at the regions of highest temperature within the combustion chamber enclosure." [0044]. Accordingly, the rejection of claim 4 as being an obvious design choice is traversed.

The Examiner has rejected claim 11 under 35 U.S.C. 103(a) as being unpatentable over Pierce in view of the design choice and in further view of Lyons et al. (6,170,481). As noted above, because claim 1 is allowable, claim 11 (which depends from claim 1 via claim 4) is allowable as well and the rejection of claim 11 is therefore traversed.

The Examiner has rejected claims 14-16 and 27-35 under 35 U.S.C. 103(a) as being unpatentable over Pierce in view of Wade (6,260,548). The Examiner cites Wade as disclosing a solid ceramic base, also with air inlets (col.4, lines 31-36).

Independent claims 14 and 27 both claim a panel with a conduit formed therein. Wade but does not disclose or suggest, however, that the air inlets disclosed could be formed as sealed conduits capable of heat transfer and pumping under pressure without leaking over a large range of temperature. Moreover, there is a critical difference in molding a one-piece, solid ceramic

object versus a one-piece, solid ceramic object with liquid-tight conduits. Also, Pierce states his tubes are attached to the inlet and outlet manifolds by welding (col.2, lines 20-23), which would be difficult to achieve with a ceramic. Even assuming that the hydro-grate of Pierce could be fabricated from a ceramic, such ceramic tubes would be very brittle and readily subject to damage or breakage from throwing logs onto the grate or cleaning the grate with typical metal fireplace implements, resulting in release of the circulating liquid. Nor would a reading of Pierce and Wade together likely cause one to readily envision Applicants' invention of a panel having liquid conduits. Because none of the references, either alone or combination, teach or suggest the presently claimed structure of a panel with conduits formed therein, the rejection of claims 14 and 27 is traversed. Further, because claims 15, 16 and 28-35 are dependent upon allowable claims, these claims are allowable as well.

The Examiner has rejected claim 17 under 35 U.S.C. 103(a) as being unpatentable over Pierce in view of Wade and in further view of Bussjager." Specifically, the Examiner points to his rejection of claim 2 as the rationale for rejecting claim 17. First, because claim 17 is dependent from allowable claim 14, claim 17 is allowable as well. Further, as noted in the rebuttal of this argument in claim 2, condensation on the devices of Pierce and Wade during combustion not a problem because the combustion is occurring on the invention, and condensation therefore cannot form. Claim 17 is directed specifically to condensation on the enclosure's panels, and Pierce/Wade/Bussjager either alone or together do not recognize the problem and therefore solved by the present invention and therefore cannot suggest the presently inventive solution using a moldable material that resists condensation. For this additional reason, the rejection of claim 17 is traversed.

With respect to claim 18, no specific rejection is recited. Because claim 18 is dependent from allowable claim 14, claim 18 is allowable as well and the rejection is traversed.

The Examiner has rejected claims 20, 23, and 25 under 35 U.S.C. 103(a) as being unpatentable over Pierce in view of Susany (5,915,374)." The Examiner cites Susany as teaching a vacuum or compression formed fireplace combustion enclosure or components thereof out of minerals such as ceramics and ceramic fibers. Because claims 20, 23 and 25 are dependent on allowable claim 19, these claims are allowable as well and the rejection is traversed.

The Examiner has rejected claim 5 by stating that the term "the system panel" has insufficient antecedent basis. While applicants believe that sufficient basis existed from the preamble of the claim, the applicants have amended the claim in order to advance prosecution and the rejection is traversed. No change in claim scope has thereby occurred.

The Examiner has rejected claims12 and 13 by stating that the term "the liquid filled conduit" recited in claim 12 has insufficient antecedent basis. Applicants believe the original reference to claim 1 was a typographical error and should have referenced claim 5 and has amended the claim accordingly. With the amendment to claim 12, claim 13, which depends from claim 12, is allowable as well. The rejection is therefore traversed. No change in claim scope has thereby occurred.

Conclusion

In view of the present amendments and remarks, Applicants submit that the claims are in condition for allowance and request that the Examiner pass this application to issuance.

Respectfully submitted,

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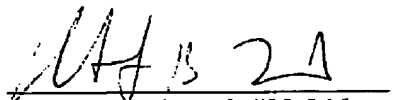
Dated: January 24, 2006

By: 

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